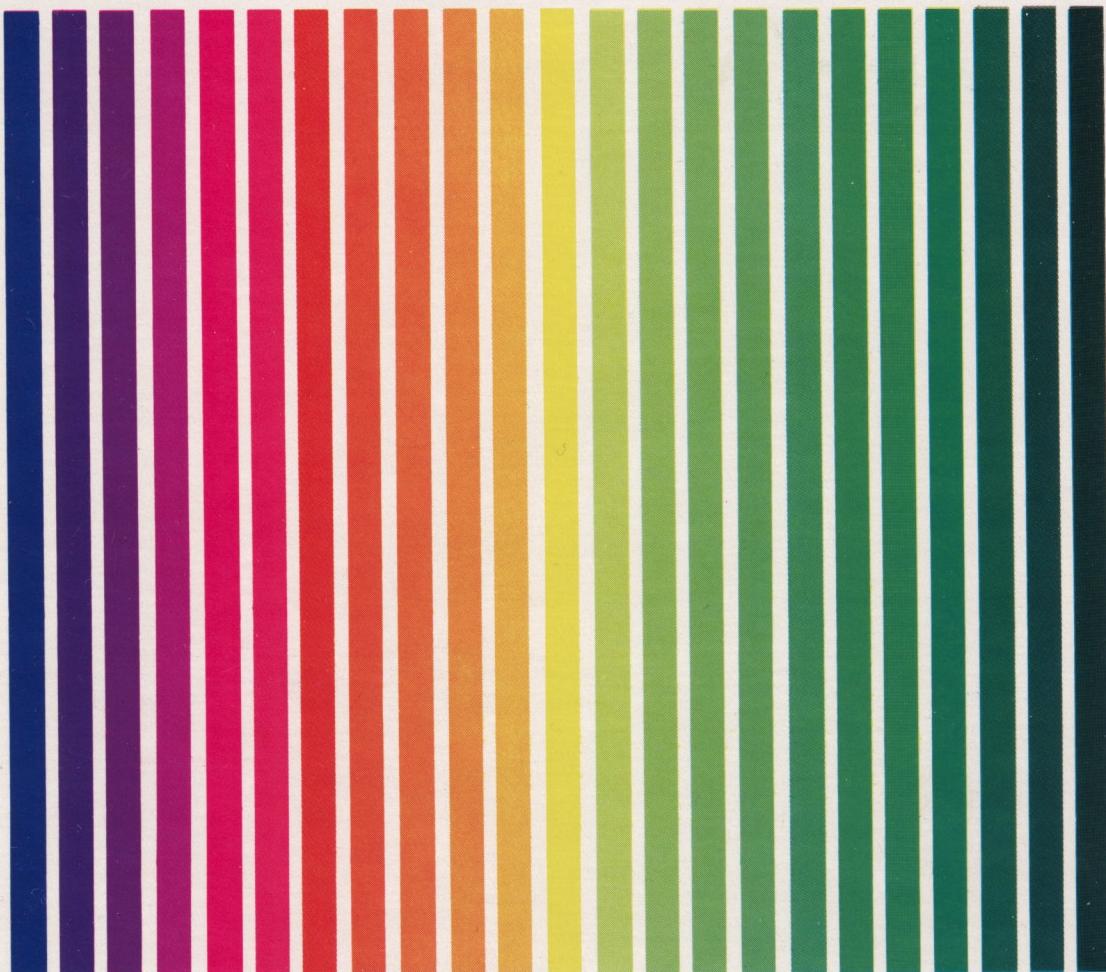


APX

ATARI® PROGRAM EXCHANGE



James Bayless

MUSIC PLAYER

A tool to use ATARI MUSIC COMPOSER™
files with your programs

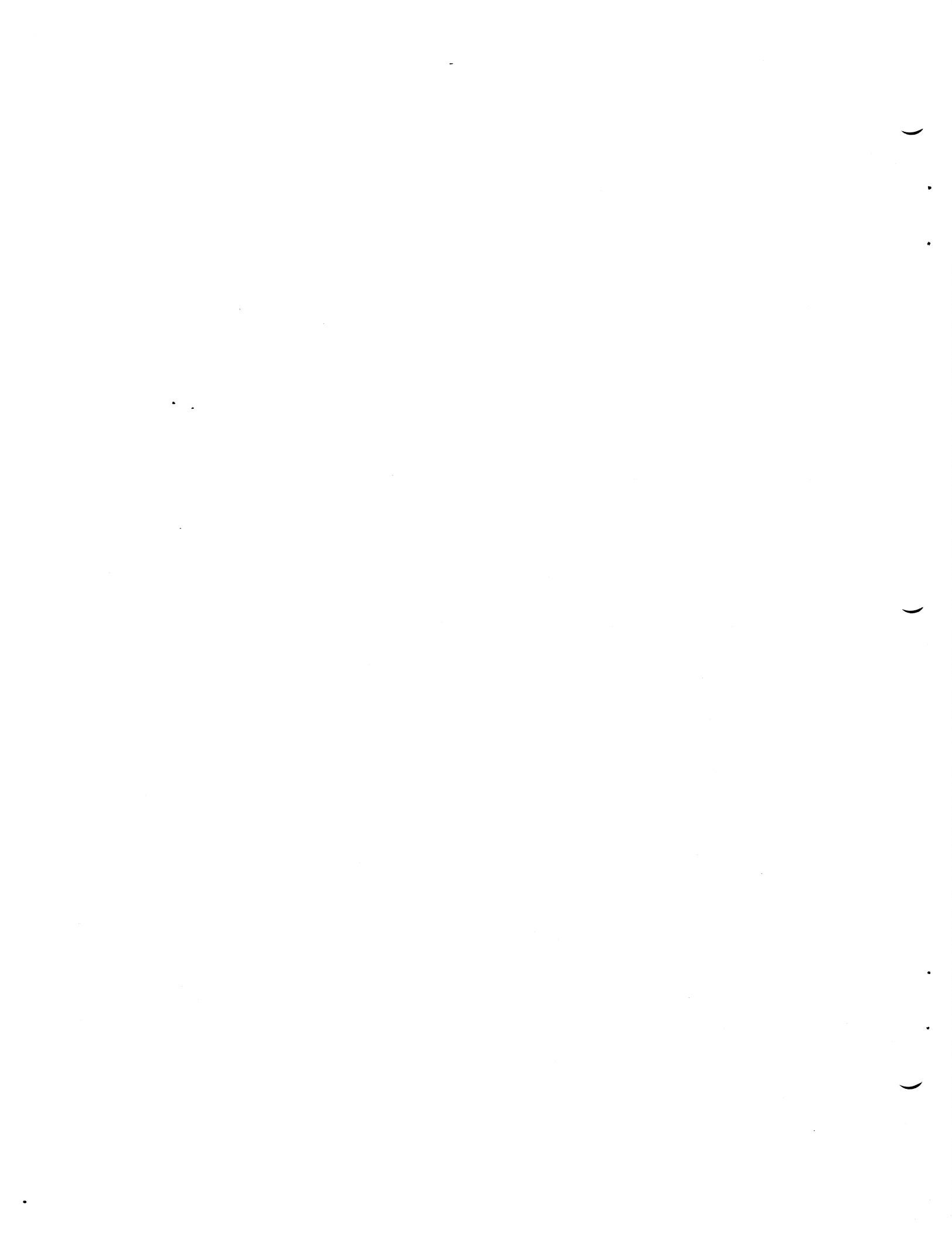
Diskette: 16K (APX-20181)

User-Written Software for ATARI Home Computers

James Bayless
MUSIC PLAYER

A tool to use ATARI MUSIC COMPOSER™
files with your programs

Diskette: 16K (APX-20181)



MUSIC PLAYER

by

James Bayless

Program and Manual Contents ©1982 James Bayless

Copyright notice. On receipt of this computer program and associated documentation (the software), the author grants you a nonexclusive license to execute the enclosed software. This software is copyrighted. You are prohibited from reproducing, translating, or distributing this software in any unauthorized manner.

Distributed By

The ATARI Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

To request an APX Product Catalog, write to the address above, or call toll-free:

800/538-1862 (outside California)
800/672-1850 (within California)

Or call our Sales number, 408/727-5603

Trademarks of Atari

The following are trademarks of Atari, Inc.

ATARI®
ATARI 400™ Home Computer
ATARI 800™ Home Computer
ATARI 410™ Program Recorder
ATARI 810™ Disk Drive
ATARI 820™ 40-Column Printer
ATARI 822™ Thermal Printer
ATARI 825™ 80-Column Printer
ATARI 830™ Acoustic Modem
ATARI 850™ Interface Module

Printed in U.S.A.

CONTENTS

INTRODUCTION -- 1

Overview -- 1
 Required accessories -- 1
 Optional accessories -- 1
 Contacting the author -- 1

GETTING STARTED -- 2

Loading MUSIC PLAYER into computer memory -- 2
 Duplicating the diskette -- 2

USING MUSIC PLAYER -- 3

Loading a Music Composer File -- 3
 MUSIC PLAYER Commands -- 3
 Ending music playing -- 4
 Warnings -- 4

ERROR CONDITIONS -- 5

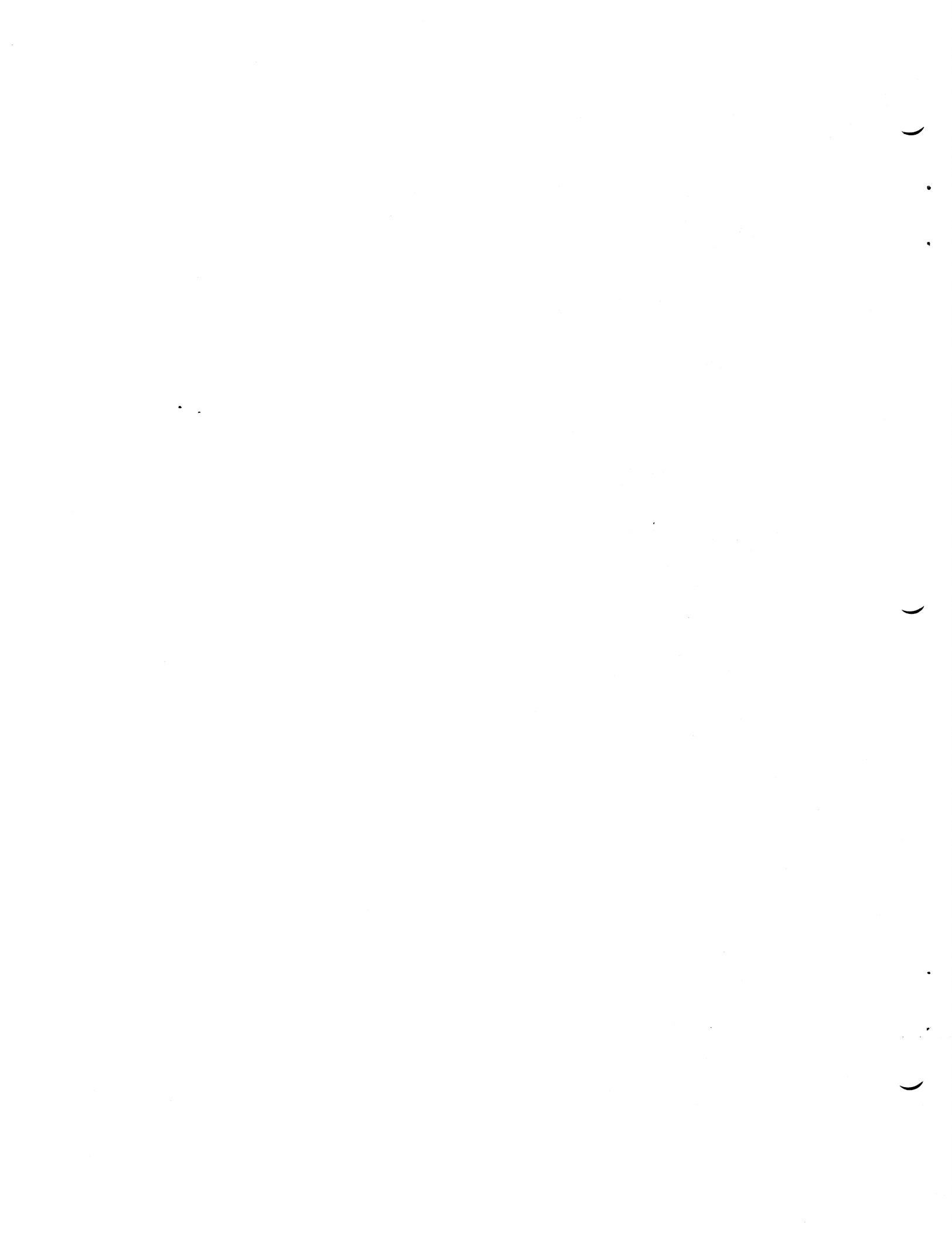
Introduction -- 5
 200 - PLAY IS ACTIVE -- 5
 201 - INCORRECT FILE STRUCTURE -- 5
 202 - NO PHRASE RECORD FOUND -- 5
 203 - NO VOICE RECORD FOUND -- 5
 204 - NO MISC RECORD FOUND -- 5

SAMPLE APPLICATION -- 6

Demonstration program -- 6

ADVANCED TECHNICAL INFORMATION -- 7

Increasing buffer size -- 7
 Varying music tempo -- 7



INTRODUCTION

OVERVIEW

MUSIC PLAYER is a companion to the ATARI Music Composer(tm) cartridge. With MUSIC PLAYER, you can have programs you've written in BASIC (or other languages) play the music you've created with Music Composer. Furthermore, MUSIC PLAYER's operation doesn't suspend your program's execution. You simply give it a command to play, and then continue with your program. MUSIC PLAYER will play the music simultaneously with program execution. In fact, you can even have music playing while you're editing a program.

Possible uses of MUSIC PLAYER include teaching music or musical concepts by using a teaching program written in BASIC along with several Music Composer files, or song guessing games, or keeping a user of any program occupied while the program performs lengthy operations.

MUSIC PLAYER operates just as if it were another ATARI input/output device. To use MUSIC PLAYER, you use the familiar commands OPEN, CLOSE, and PUT; no PEEKs or POKEs are needed. It works basically as follows. As part of your program, you include a routine to load the MUSIC COMPOSER song file into memory. After the file loads, your program issues an OPEN command using M: (to specify MUSIC PLAYER) as the device code. Your program can then start and stop the music at any time by using the PUT command. MUSIC PLAYER automatically loads into your computer when you turn it on, so all you then have to do is RUN your program.

MUSIC PLAYER is usable with assembly language and with BASIC and other languages permitting AUTORUN.SYS files and using OPEN, CLOSE, or equivalent statements.

REQUIRED ACCESSORIES

16K RAM
ATARI 810 Disk Drive
File(s) created with ATARI Music Composer (CXL4007)

OPTIONAL ACCESSORIES

ATARI BASIC Language Cartridge (for sample program)

CONTACTING THE AUTHOR

Users wishing to contact the author about MUSIC PLAYER may write to him at:

8805 North Plaza, #1108
Austin, Texas 78753

GETTING STARTED

LOADING MUSIC PLAYER INTO COMPUTER MEMORY

1. Insert the ATARI BASIC Language Cartridge in the (left) cartridge slot of your computer.
2. Turn on your disk drive. When the busy light goes out, open the door and insert the MUSIC PLAYER diskette with the label in the lower right-hand corner nearest to you. Close the door.
3. Turn on your computer and TV set.
4. When the READY prompt displays, MUSIC PLAYER has been loaded. You can now run any program that uses its capabilities.

DUPLICATING THE DISKETTE

If this is the first time you've loaded MUSIC PLAYER, make a working copy of it and save the original for backup use only. Be sure that the diskette onto which you copy MUSIC PLAYER has been formatted under DOS II and contains the DOS files. To duplicate the diskette, type DOS select option O (Duplicate File), and respond to the prompt by typing AUTORUN.SYS .

Once you've made this copy, you must also create a MEM.SAV file on the diskette (use option N on the DOS menu). (See the second paragraph under Warnings for an explanation of why you must create a MEM.SAV file.) Then turn off and turn on your computer to continue your session.

USING MUSIC PLAYER

LOADING A MUSIC COMPOSER FILE

To use MUSIC PLAYER, you must first load the Music Composer file for the desired song into computer memory. MUSIC PLAYER has reserved a section of memory to hold this information. This buffer starts at memory location 8600 (decimal) and is 2000 bytes long (you can increase the size, if necessary; see the Advanced Technical Information section).

Thus, a typical BASIC subroutine to load the Music Composer file "D:SONG.MUS" would be:

```
10 OPEN #1,4,0,"D:SONG.MUS"
20 TRAP 80
30 FOR I=0 TO 1999
40 GET #1,A
50 POKE 8600+I,A
60 NEXT I
70 PRINT "BUFFER OVERFLOW":GOTO 90
80 POP
90 CLOSE #1
100 RETURN
```

Once the music data loads, you use an OPEN command to set up MUSIC PLAYER to play it. For example,

```
OPEN #1,8,0,"M:"
```

The device specification "M:" for "Music" specifies that you're initializing MUSIC PLAYER. MUSIC PLAYER can encounter some error conditions, described under Error Conditions, while trying to execute this command, causing it to abort.

MUSIC PLAYER COMMANDS

Once you've set up MUSIC PLAYER, you can start and stop the music by issuing commands to it using the PUT byte command. For example, to start playing the music from its beginning, you would execute the command:

```
PUT #1,ASC("P")
```

where the "P" tells MUSIC PLAYER to play the music.

MUSIC PLAYER recognizes the following commands:

1. P - PLAY the music from the beginning. P always results in a start or a restart of the music from its beginning.
2. H - HALT the music at this point. H causes the music to be

suspended until you give either a P or an R command.

3. R - RESUME playing at the point the music halted. You use H and R as often as you like.

Once you issue these commands, the BASIC program continues executing while the music plays. You can even have music playing while you're editing the program itself.

ENDING MUSIC PLAYING

To end music playing altogether, issue a CLOSE command to the device number that MUSIC PLAYER is using. For example,

```
CLOSE #1
```

WARNINGS

Just like BASIC's SOUND command, you must not attempt any input/output to peripheral devices (such as a disk drive, a program recorder, or a printer) while MUSIC PLAYER is playing. To perform such I/O, either HALT or END the music playing first.

You must have a MEM.SAV file on every diskette using MUSIC PLAYER. Otherwise, when you go to DOS, the MUSIC PLAYER code will be overwritten and lost. Any attempt to use it after this happens can lead to system lockup, the only remedy being to turn off your computer and turn it on again.

ERROR CONDITIONS

INTRODUCTION

MUSIC PLAYER can encounter several possible errors when it tries to execute an OPEN command. These errors are identified with a number, starting at 200, to avoid conflicting with other ATARI I/O error numbers.

200 - PLAY IS ACTIVE

You've attempted to OPEN or reopen a data file, but you haven't properly CLOSEd one that was previously opened. You can have only one data file open at a time.

201 - INCORRECT FILE STRUCTURE

A data record (Phrase, Voice, Misc., or bad data) has been found that doesn't start with the correct header byte of 170. All data records must have the proper header byte before they're processed.

202 - NO PHRASE RECORD FOUND

The data file has no Phrase records. All data files must have at least one Phrase record. You might not have specified to Music Composer that you wanted to save everything when you saved the data file.

203 - NO VOICE RECORD FOUND

The data file has no Voice records. All data files must have at least one Voice record. You might not have specified to Music Composer that you wanted to save everything when you saved the data file.

204 - NO MISC RECORD FOUND

The data file has no Misc record. All data files must have a Misc record. You might not have specified to Music Composer that you wanted to save everything when you saved the data file.

SAMPLE APPLICATION

DEMONSTRATION PROGRAM

As an example in using MUSIC PLAYER, the diskette contains a demonstration BASIC program, along with Music Composer data files for the following songs:

- 1 - Ode to Joy
- 2 - La Donna e Mobile
- 3 - Bourree
- 4 - The Barber of Seville
- 5 - The Emperor Waltz
- 6 - Amazing Grace
- 7 - Dixie
- 8 - Greensleeves
- 9 - Shenandoah
- 10 - When Johnny Comes Marching Home Again
- 11 - America the Beautiful

To try the program, insert the original MUSIC PLAYER diskette and when the READY prompt displays, type

RUN "D:PLAYER"

A menu listing the songs displays. Follow the directions given on the screen and enjoy!

ADVANCED TECHNICAL INFORMATION

INCREASING THE BUFFER SIZE

The default buffer size of MUSIC PLAYER is 2000 bytes, starting at decimal address 8600 (this number was chosen for ease in remembering). This buffer size has been found to be large enough for all but very large Music Composer data files. However, should you need a larger buffer size, you can change it with the commands:

```
POKE 7462,A  
POKE 7467,B
```

where

A = low byte of (8600 + your buffer size)
B = high byte of (8600 + your buffer size)

and then pressing SYSTEM RESET and typing NEW . This sequence causes MUSIC PLAYER to reinitialize with the new buffer size you've given it.

VARYING MUSIC TEMPO

One other item of interest is the location of the variable controlling the tempo of the music. Although this is read in from the Music Composer data when the OPEN command is given, you can change it at any time after that, such as when the music is playing. Its location is decimal 8441 and normal values are 1 through 9, as specified in the Music Composer manual.



Limited Warranty on Media and Hardware Accessories. Atari, Inc. ("Atari") warrants to the original consumer purchaser that the media on which APX Computer Programs are recorded and any hardware accessories sold by APX shall be free from defects in material or workmanship for a period of thirty (30) days from the date of purchase. If you discover such a defect within the 30-day period, call APX for a return authorization number, and then return the product to APX along with proof of purchase date. We will repair or replace the product at our option. If you ship an APX product for in-warranty service, we suggest you package it securely with the problem indicated in writing and insure it for value, as Atari assumes no liability for loss or damage incurred during shipment.

This warranty shall not apply if the APX product has been damaged by accident, unreasonable use, use with any non-ATARI products, unauthorized service, or by other causes unrelated to defective materials or workmanship.

Any applicable implied warranties, including warranties of merchantability and fitness for a particular purpose, are also limited to thirty (30) days from the date of purchase. Consequential or incidental damages resulting from a breach of any applicable express or implied warranties are hereby excluded.

The provisions of the foregoing warranty are valid in the U.S. only. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

Disclaimer of Warranty on APX Computer Programs. Most APX Computer Programs have been written by people not employed by Atari. The programs we select for APX offer something of value that we want to make available to ATARI Home Computer owners. In order to economically offer these programs to the widest number of people, APX Computer Programs are not rigorously tested by Atari and are sold on an "as is" basis without warranty of any kind. Any statements concerning the capabilities or utility of APX Computer Programs are not to be construed as express or implied warranties.

Atari shall have no liability or responsibility to the original consumer purchaser or any other person or entity with respect to any claim, loss, liability, or damage caused or alleged to be caused directly or indirectly by APX Computer Programs. This disclaimer includes, but is not limited to, any interruption of services, loss of business or anticipatory profits, and/or incidental or consequential damages resulting from the purchase, use, or operation of APX Computer Programs.

Some states do not allow the limitation or exclusion of implied warranties or of incidental or consequential damages, so the above limitations or exclusions concerning APX Computer Programs may not apply to you.

**For the complete list of current
APX programs, ask your ATARI retailer
for the APX Product Catalog**





P.O. Box 3705
Santa Clara, CA 95055

Review Form

We're interested in your experiences with APX programs and documentation, both favorable and unfavorable. Many of our authors are eager to improve their programs if they know what you want. And, of course, we want to know about any bugs that slipped by us, so that the author can fix them. We also want to know whether our

instructions are meeting your needs. You are our best source for suggesting improvements! Please help us by taking a moment to fill in this review sheet. Fold the sheet in thirds and seal it so that the address on the bottom of the back becomes the envelope front. Thank you for helping us!

1. Name and APX number of program.

2. If you have problems using the program, please describe them here

3. What do you especially like about this program?

4. What do you think the program's weaknesses are?

5. How can the catalog description be more accurate or comprehensive?

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program:

- Easy to use
- User-oriented (e.g., menus, prompts, clear language)
- Enjoyable
- Self-instructive
- Useful (non-game programs)
- Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

8. What did you especially like about the user instructions?

9. What revisions or additions would improve these instructions?

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

11. Other comments about the program or user instructions:

From



ATARI Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

[seal here]